

**IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION**

CELLULAR COMMUNICATIONS
EQUIPMENT LLC,

Plaintiff,

v.

ZTE CORPORATION, ZTE (USA) INC.,
AT&T INC., AT&T MOBILITY LLC,
VERIZON COMMUNICATIONS INC.,
CELLCO PARTNERSHIP D/B/A VERIZON
WIRELESS,
SPRINT CORPORATION,
SPRINT SOLUTIONS, INC.,
SPRINT SPECTRUM L.P.,
BOOST MOBILE, LLC,
T-MOBILE USA, INC., and
T-MOBILE US, INC.,

Defendants.

CIVIL ACTION NO. 3:17-cv-2805

JURY TRIAL DEMANDED

**PLAINTIFF'S ORIGINAL COMPLAINT
FOR PATENT INFRINGEMENT**

Plaintiff Cellular Communications Equipment LLC files this Original Complaint against ZTE Corporation; ZTE (USA) Inc. AT&T Inc.; AT&T Mobility LLC; Verizon Communications Inc.; Cellco Partnership d/b/a Verizon Wireless; Sprint Corporation; Sprint Solutions, Inc.; Sprint Spectrum L.P.; Boost Mobile, LLC; T-Mobile USA, Inc.; and T-Mobile US, Inc. (collectively, the “Defendants”) for infringement of U.S. Patent No. 8,254,872 (“the ’872 patent”), U.S. Patent No. 8,902,770 (“the ’770 patent”), and U.S. Patent No. 8,645,786 (“the ’786 patent”).

THE PARTIES

1. Cellular Communications Equipment LLC (“CCE”) is a Texas limited liability company with its principal place of business in Plano, Texas.
2. ZTE Corporation is a corporation organized and existing under the laws of the People’s Republic of China with its principal place of business in ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong Province, P.R. China 518057. This Defendant does business in the state of Texas and in the Northern District of Texas. This Defendant may be served with process at its principal place of business at ZTE Place, Keji Road South, Hi-Tech Industrial Park, Nanshan District, Shenzhen, Guangdong Province, P.R. China 518057.
3. ZTE (USA) Inc. is a New Jersey corporation with its principal place of business in Richardson, Texas. This Defendant does business in the State of Texas and in the Northern District of Texas. This Defendant may be served with process through its agent, Jing Li, 2425 N. Central Expressway, Suite 323, Richardson, Texas 75080.
4. AT&T Inc. is a Delaware corporation with its principal place of business in Dallas, Texas. This Defendant does business in the State of Texas and in the Northern District of Texas. This Defendant may be served with process through its agent, CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3136.
5. AT&T Mobility LLC (with AT&T Inc., “AT&T”) is a Delaware limited liability company with its principal place of business in Atlanta, Georgia. This Defendant does business in the State of Texas and in the Northern District of Texas. This Defendant may be served with process through its agent, CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, Texas 75201-3136.

6. Verizon Communications Inc. is a Delaware corporation with its principal place of business in New York, New York. This Defendant does business in the State of Texas and in the Northern District of Texas. This Defendant may be served with process through its agent, The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801.

7. Cellco Partnership d/b/a Verizon Wireless (with Verizon Communications Inc., “Verizon”) is a Delaware general partnership with its principal place of business in Basking Ridge, New Jersey. This Defendant does business in the State of Texas and in the Northern District of Texas. This Defendant may be served with process through its agent, The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801.

8. Sprint Corporation is a Delaware corporation with its principal place of business in Overland Park, Kansas. This Defendant does business in the State of Texas and in the Northern District of Texas. This Defendant may be served with process through its agent, Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808.

9. Sprint Solutions, Inc. is a Delaware corporation with its principal place of business in Overland Park, Kansas. This Defendant does business in the State of Texas and in the Northern District of Texas. This Defendant may be served with process through its agent, Corporation Service Company, 211 E. 7th Street, Suite 620, Austin, TX 78701-3218.

10. Sprint Spectrum L.P. is a Delaware limited partnership with its principal place of business in Overland Park, Kansas. This Defendant does business in the State of Texas and in the Northern District of Texas. This Defendant may be served with process through its agent, Corporation Service Company, 211 E. 7th Street, Suite 620, Austin, TX 78701-3218.

11. Boost Mobile, LLC (with Sprint Corporation, Sprint Solutions, Inc., and Sprint Spectrum L.P., “Sprint”) is a Delaware limited liability company with its principal place of business in Irvine, California. This Defendant does business in the State of Texas and in the Northern District of Texas. This Defendant may be served with process through its agent, Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808.

12. T-Mobile USA, Inc. is a Delaware corporation with a principal place of business in Bellevue, Washington. T-Mobile USA, Inc. maintains a significant presence in Richardson, Texas and offers products and services under the T-Mobile and MetroPCS brands. This Defendant does business in the State of Texas and in the Northern District of Texas. This Defendant may be served with process through its agent, Corporation Service Company, 211 E. 7th Street, Suite 620, Austin, TX 78701-3218.

13. T-Mobile US, Inc. (with T-Mobile USA, Inc., “T-Mobile”) is a Delaware corporation with its principal place of business in Bellevue, Washington. T-Mobile US, Inc. maintains a significant presence in Richardson, Texas, and offers products and services under the T-Mobile and MetroPCS brands. This Defendant does business in the State of Texas and in the Northern District of Texas. This Defendant may be served with process through its agent, Corporation Service Company, 251 Little Falls Drive, Wilmington, Delaware 19808.

JURISDICTION AND VENUE

14. This action arises under the patent laws of the United States, namely 35 U.S.C. §§ 271, 281, and 284-285, among others.

15. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331, 1338(a), and 1367.

16. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1400(b). On information and belief, each Defendant has committed acts of infringement in this judicial district and has regular and established places of business in this judicial district.

17. On information and belief, each Defendant is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Texas Long Arm Statute, due at least to their substantial business in this State and judicial district, including: (a) at least part of their infringing activities alleged herein; and (b) regularly doing or soliciting business, engaging in other persistent conduct, and/or deriving substantial revenue from goods sold and services provided to Texas residents.

COUNT I

(INFRINGEMENT OF U.S. PATENT NO. 8,254,872)

18. CCE incorporates paragraphs 1 through 17 herein by reference.

19. CCE is the assignee of the '872 patent, entitled "Simplified Method for IMS Registration in the Event of Emergency Calls," with ownership of all substantial rights in the '872 patent, including the right to exclude others and to enforce, sue, and recover damages for past, present and future infringements. A true and correct copy of the '872 patent is attached as Exhibit A.

20. The '872 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

21. Defendants ZTE, AT&T, Verizon, and T-Mobile have infringed and/or indirectly infringed, and continue to directly infringe and/or indirectly infringe, one or more claims of the '872 patent in this judicial district and elsewhere in Texas and the United States, without the consent or authorization of CCE, including at least claims 1-6, 12-14, and 16-18, by, among

other things, making, using, offering for sale, selling and/or importing ZTE mobile devices that support voice over LTE. Such ZTE mobile devices include AT&T Trek 2, ZTE Maven, ZTE Maven 2, ZTE Overture 2, and ZTE Sonata 3, sold or otherwise distributed by or through AT&T and/or ZTE (the “’872 AT&T Mobile Devices”); Blade Z Max, Cymbal Z-320, ZTE AVID 828, ZTE Avid Plus, and ZTE ZMAX Pro, sold or otherwise distributed by or through T-Mobile and/or ZTE (the “’872 T-Mobile Mobile Devices”); Blade Vantage, sold and/or otherwise distributed by Verizon and/or ZTE (the “’872 Verizon Mobile Devices”); Blade X Max, ZTE Grand X Max 2, ZTE Grand X3, and ZTE Imperial Max, sold or otherwise distributed by or through Cricket Wireless LLC and/or ZTE (the “’872 Cricket Mobile Devices”); and Blade V8 Pro, ZMAX Grand/Champ/Avid 916, ZTE Axon, ZTE AXON 7, and ZTE AXON 7 Mini, and unlocked versions of any of the devices listed above, sold and/or otherwise distributed by ZTE (the “’872 Unlocked Devices”). These devices are collectively referred to as the “’872 ZTE Devices.”

22. Defendants ZTE, AT&T, Verizon, and T-Mobile directly infringe the apparatus claims of the ’872 patent by making, using, offering to sell, selling, and/or importing the ’872 ZTE Devices. Defendants ZTE, AT&T, Verizon, and T-Mobile also directly infringe the ’872 patent by making, using, selling, offering to sell, and/or importing the ’872 ZTE Devices to practice the claimed methods. Defendants are therefore liable for direct infringement.

23. Specifically, each of the ’872 ZTE Devices is configured to receive a network identifier of a visited network when it is registered with the visited network, compare the received network identifier with a network identifier of a home network, and set up an emergency call connection without registering with an IP Multimedia Subsystem when the ’872 ZTE Device is already registered in the IP Multimedia Subsystem and the received network

identifier matches the network identifier of the home network, as claimed in claims 1-6, 12-14, and 16-18. See, e.g., descriptions of the Mobile Country Code (MCC), Mobile Network Code (MNC), Globally Unique Temporary UE Identity (GUTI) and PLMN Identifier in 3GPP TS 23.003, architecture for emergency sessions in 3GPP TS 23.167, attachment procedure in 3GPP TS 23.401, process and procedures associated with emergency service provisioning and emergency session setup in 3GPP TS 24.229, SIM card contents in 3GPP TS 31.102, and discussion of PLMN Identity in 3GPP TS 36.413.

24. Additionally, Defendants ZTE, AT&T, Verizon, and T-Mobile are liable for indirect infringement of the '872 patent because they induce and/or contribute to the direct infringement of the patent by their customers and other end users.

25. Each Defendant is a 3rd Generation Partnership Project ("3GPP") member organization, or is affiliated with a 3GPP member organization. 3GPP solicits identification of standard essential patents. Defendants have had actual notice of the '872 patent at least by way of disclosure to 3GPP via the European Telecommunications Standards Institute ("ETSI," an organizational member of 3GPP). Defendants AT&T, Verizon, and T-Mobile have also had actual notice of the '872 patent by way of its assertion against them in Case No. 6:14-cv-759 (E.D. Tex.). In addition, on information and belief, ZTE monitors other litigation involving CCE, and therefore was also on actual notice of the '872 patent by way of its assertion in Case No. 6:14-cv-759 (E.D. Tex.). Finally, Defendants also have knowledge of the '872 patent based on filing and service of this Complaint.

26. Despite having knowledge of the '872 patent, Defendants named in this Count have specifically intended and continue to specifically intend for persons who acquire and use such devices, including their customers, to use such devices in a manner that infringes the '872

patent, including at least claims 1-6. This is evident when Defendants encourage and instruct customers and other end users in the use and operation of the '872 ZTE Devices to make voice over LTE calls.

27. In particular, despite having knowledge of the '872 patent, Defendants have provided, and continue to provide, instructional materials, such as user guides, owner manuals, and similar online resources (available via http://www.zteusa.com/support_page/, for instance) that specifically teach and encourage customers and other end users to use the '872 ZTE Devices in an infringing manner. By providing such instructions, Defendants ZTE, AT&T, Verizon, and T-Mobile know (and have known) that their actions have, and continue to, actively induce infringement.

28. Additionally, Defendants named in this Count know, and have known, that the '872 ZTE Devices include proprietary hardware components and software instructions that work in concert to perform specific, intended functions. Such specific, intended functions, carried out by these hardware and software combinations, are a material part of the inventions of the '872 patent and are not staple articles of commerce suitable for substantial non-infringing use.

29. Specifically, each of the '872 ZTE Devices contains at least a baseband processor and associated transceiver which contain functionality that is specifically programmed and/or configured to receive a network identifier of a visited network when the '872 ZTE Device is registered with the visited network, compare the received network identifier with a network identifier of a home network, and set up an emergency call connection without registering with an IP Multimedia Subsystem when the '872 ZTE Device is already registered in the IP Multimedia Subsystem and the received network identifier matches the network identifier of the

home network, as claimed in claims 1-6, 12-14, and 16-18. Defendants ZTE, AT&T, Verizon, and T-Mobile are, thus, liable for contributory infringement.

30. ZTE and AT&T test, make, use, offer for sale, sell, and/or import the '872 AT&T Mobile Devices and '872 Cricket Mobile Devices described in this Count, pursuant to one or more contractual agreements between them relating to, at least, the distribution and sale of such devices. Accordingly, ZTE and AT&T are jointly, severally, or alternatively liable for infringements described in this Count.

31. ZTE and Verizon test, make, use, offer for sale, sell, and/or import the '872 Verizon Mobile Devices described in this Count, pursuant to one or more contractual agreements between them relating to, at least, the distribution and sale of such devices. Accordingly, ZTE and Verizon are jointly, severally, or alternatively liable for infringements described in this Count.

32. ZTE and T-Mobile test, make, use, offer for sale, sell, and/or import the '872 T-Mobile Mobile Devices described in this Count, pursuant to one or more contractual agreements between them relating to, at least, the distribution and sale of such devices. Accordingly, ZTE and T-Mobile are jointly, severally, or alternatively liable for infringements described in this Count.

33. CCE has been damaged as a result of Defendants' infringing conduct described in this Count. Defendants ZTE, AT&T, Verizon, and T-Mobile are, thus, liable to CCE in an amount that adequately compensates it for their infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT II

(INFRINGEMENT OF U.S. PATENT NO. 8,902,770)

34. CCE incorporates paragraphs 1 through 17 herein by reference.

35. CCE is the assignee of the '770 patent, entitled "Carrier Indicator Field Usage and Configuration in Carrier Aggregation," with ownership of all substantial rights in the '770 patent, including the right to exclude others and to enforce, sue and recover damages for past, present and future infringements. A true and correct copy of the '770 patent is attached as Exhibit B.

36. The '770 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

37. Defendants ZTE, AT&T, Verizon, Sprint, and T-Mobile have directly infringed and/or indirectly infringed, and continue to directly infringe and/or indirectly infringe, one or more claims of the '770 patent in this judicial district and elsewhere in Texas and the United States, without the consent or authorization of CCE, including at least claims 1-3, 7, 9-12, 16, 18-21, and 24, by, among other things, making, using, offering for sale, selling and/or importing LTE devices that support carrier aggregation. Such ZTE mobile devices include AT&T Trek 2, Blade Spark, ZTE AT&T Velocity, ZTE Maven 2, and ZTE Sonata 3, sold or otherwise distributed by or through AT&T and/or ZTE (the "'770 AT&T Mobile Devices"); Blade Vantage, sold and/or otherwise distributed by Verizon and/or ZTE (the "'770 Verizon Mobile Devices"); Max XL, Prestige 2, Tempo X, ZTE Pocket Wi-Fi, ZTE Prestige, and ZTE Tempo, sold or otherwise distributed by or through Sprint and/or ZTE (the "'770 Sprint Mobile Devices"); Blade Z Max, Cymbal Z-320, ZTE Avid 828, ZTE Avid Plus, ZMax Pro, and ZTE Avid Trio, sold or otherwise distributed by or through T-Mobile and/or ZTE (the "'770 T-Mobile

Mobile Devices"); Blade X Max, Grand X 4, ZTE Grand X3, ZTE Imperial Max, and ZTE Grand X Max 2, sold or otherwise distributed by or through Cricket Wireless LLC and/or ZTE (the "'770 Cricket Mobile Devices"); Prestige 2 and Max XL, sold or otherwise distributed by or through Virgin Mobile and/or ZTE (the "'770 Virgin Mobile Devices"); and Blade V8 Pro, ZMax Grand LTE/Champ/Avid 916, ZTE Axon, ZTE AXON 7, and ZTE AXON 7 Mini, and unlocked versions of any of the devices listed above, sold and/or otherwise distributed by ZTE (the "'770 Unlocked Devices"). These devices are collectively referred to as the "'770 ZTE Devices."

38. Defendants directly infringe the apparatus claims of the '770 patent by making, using, offering to sell, selling, and/or importing the '770 ZTE Devices. Defendants also directly infringe the '770 patent by making, using, selling, offering to sell, and/or importing the '770 ZTE Devices to practice the claimed methods. Defendants are therefore liable for direct infringement.

39. Specifically, each of the '770 ZTE Devices changes the format of a downlink control channel based on explicit signaling between a network and the '770 ZTE Device in conjunction with switching the '770 ZTE Device between being enabled for cross carrier scheduling and being disabled for cross carrier scheduling, and thereafter using the changed format on at least one serving cell, as claimed in claims 1-3, 7, 9-12, 16, 18-21, and 24. See, e.g., formats of downlink control information (DCI) and mapping of DCI in 3GPP TS 36.212, PDCCH assignment procedure in 3GPP TS 36.213, and RRC Connection Reconfiguration messages in 3GPP TS 36.331, including the use of carrier indicator fields.

40. Additionally, Defendants are liable for indirect infringement of the '770 patent because they induce and/or contribute to the direct infringement of the patent by their customers and other end users.

41. Each Defendant is a 3rd Generation Partnership Project ("3GPP") member organization, or is affiliated with a 3GPP member organization. 3GPP solicits identification of standard essential patents. Defendants have had actual notice of the '770 patent at least by way of disclosure to 3GPP via the European Telecommunications Standards Institute ("ETSI," an organizational member of 3GPP). Defendants AT&T, Sprint, Verizon, and T-Mobile have also had actual notice of the '770 patent by way of its assertion against them in Case No. 6:17-cv-225 (E.D. Tex.). In addition, on information and belief, ZTE monitors other litigation involving CCE, and therefore was also on actual notice of the '770 patent by way of its assertion in Case No. 6:17-cv-225 (E.D. Tex.). Defendants also have knowledge of the '770 patent based on filing and service of this Complaint.

42. Despite having knowledge of the '770 patent, Defendants named in this Count have intended and continue to specifically intend for persons who acquire and use such devices, including their customers, to use such devices in a manner that infringes the '770 patent, including at least claims 1-3, 7, and 9. This is evident when Defendants encourage and instruct customers and other end users in the use and operation of the '770 ZTE Devices.

43. In particular, despite having knowledge of the '770 patent, Defendants have provided, and continue to provide, instructional materials, such as user guides, owner manuals, and similar online resources (available via http://www.zteusa.com/support_page/, for instance) that specifically teach and encourage customers and other end users to use the '770 ZTE Devices

in an infringing manner. By providing such materials, Defendants know (and have known) that their actions have, and continue to, actively induce infringement.

44. Additionally, Defendants named in this Count know, and have known, that the '770 ZTE Devices include proprietary hardware components and software instructions that work in concert to perform specific, intended functions. Such specific, intended functions, carried out by these hardware and software combinations, are a material part of the inventions of the '770 patent and are not staple articles of commerce suitable for substantial non-infringing use.

45. Specifically, each of the '770 ZTE Devices contains at least a baseband processor and associated transceiver which contain functionality that is specifically programmed and/or configured to change the format of a downlink control channel based on explicit signaling between a network and the '770 ZTE Device in conjunction with switching the '770 ZTE Device between being enabled for cross carrier scheduling and being disabled for cross carrier scheduling, and thereafter using the changed format on at least one serving cell, as claimed in claims 1-3, 7, 9-12, 16, 18-21, and 24. Defendants are, thus, liable for contributory infringement.

46. ZTE and AT&T test, make, use, offer for sale, sell, and/or import the '770 AT&T Devices and '770 Cricket Mobile Devices described in this Count, pursuant to one or more contractual agreements between them relating to, at least, the distribution and sale of such devices. Accordingly, ZTE and AT&T are jointly, severally, or alternatively liable for infringements described in this Count.

47. ZTE and Verizon test, make, use, offer for sale, sell, and/or import the '770 Verizon Mobile Devices described in this Count, pursuant to one or more contractual agreements between them relating to, at least, the distribution and sale of such devices. Accordingly, ZTE

and Verizon are jointly, severally, or alternatively liable for infringements described in this Count.

48. ZTE and Sprint test, make, use, offer for sale, sell, and/or import the '770 Sprint Devices and '770 Virgin Mobile Devices described in this Count, pursuant to one or more contractual agreements between them relating to, at least, the distribution and sale of such devices. Accordingly, ZTE and Sprint are jointly, severally, or alternatively liable for infringements described in this Count.

49. ZTE and T-Mobile test, make, use, offer for sale, sell, and/or import the '770 T-Mobile Devices described in this Count, pursuant to one or more contractual agreements between them relating to, at least, the distribution and sale of such devices. Accordingly, ZTE and T-Mobile are jointly, severally, or alternatively liable for infringements described in this Count.

50. CCE has been damaged as a result of Defendants' infringing conduct described in this Count. Defendants are, thus, liable to CCE in an amount that adequately compensates it for their infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT III

(INFRINGEMENT OF U.S. PATENT NO. 8,645,786)

51. CCE incorporates paragraphs 1 through 17 herein by reference.

52. CCE is the assignee of the '786 patent, entitled "Decoding Method," with ownership of all substantial rights in the '786 patent, including the right to exclude others and to enforce, sue, and recover damages for past, present and future infringements. A true and correct copy of the '786 patent is attached as Exhibit C.

53. The '786 patent is valid, enforceable, and was duly issued in full compliance with Title 35 of the United States Code.

54. Defendants ZTE, AT&T, and T-Mobile have directly infringed and/or indirectly infringed, and continue to directly infringe and/or indirectly infringe, one or more claims of the '786 patent in this judicial district and elsewhere in Texas and the United States, without the consent or authorization of CCE, including at least claims 1-5, 8, and 12-13, by, among other things, making, using, offering for sale, selling and/or importing devices that operate in a UMTS network environment using FDD enhanced uplink. Such ZTE mobile devices include AT&T Home Base, AT&T Trek 2, AT&T Z223, Avail, Blade Spark, Compel, Radiant, Z432, Z998, ZTE AT&T Velocity, ZTE Maven, ZTE Maven 2, ZTE Mobley, ZTE Overture 2, ZTE Sonata 3, ZTE Z221, ZTE Z331, ZTE Z431/Altair, ZTE Z667/Zinger/Flame/Whirl 2, and ZTE ZMAX 2, sold or otherwise distributed by or through ZTE and/or AT&T (the "'786 AT&T Mobile Devices"); Blade Z Max, Concord, Concord 2, Cymbal Z-320, T-Mobile 4G Hotspot, T-Mobile Sonic 2.0 Mobile Hotspot, Zmax, ZTE Aspect, ZTE Avid Plus, ZTE Avid Trio, ZTE Obsidian, ZTE T-Mobile 4G Mobile Wifi Z64, ZTE667/Zinger/Flame/Whirl 2, and ZTE ZMAX Pro, sold or otherwise distributed by or through ZTE and/or T-Mobile (the "'786 T-Mobile Mobile Devices"); Blade X Max, Grand X, Grand X 4, ZTE Fanfare, ZTE Grand X Max 2, ZTE Grand X Max Plus, ZTE Grand X3, ZTE Grand Xmax, ZTE Prelude/Avail 2, and ZTE Sonata 2/Paragon, sold or otherwise distributed by or through Cricket Wireless LLC and/or ZTE (the "'786 Cricket Mobile Devices"); and Blade V8 Pro, Grand S, Max XL, Nubia 5, Nubia 5S Mini LTE, ZMAX Grand/Champ/Avid 916, ZTE Axon, ZTE AXON 7, ZTE AXON 7 Mini, ZTE Grand Memo II LTE, and ZTE Whirl and unlocked versions of any of the devices listed above,

sold and/or otherwise distributed by ZTE (the “’786 Unlocked Devices”). These devices are collectively referred to as the “’786 ZTE Devices.”

55. Defendants ZTE, AT&T, and T-Mobile directly infringe the apparatus claims of the ’786 patent by making, using, offering to sell, selling, and/or importing the ’786 ZTE Devices. Defendants ZTE, AT&T, and T-Mobile also directly infringe the ’786 patent by making, using, selling, offering to sell, and/or importing the ’786 ZTE Devices to practice the claimed methods. Defendants are therefore liable for direct infringement.

56. Specifically, as claimed by claims 1-5, 8, and 12-13, each of the ’786 ZTE Devices is configured to initially transmit information content in a first data packet, wherein the information is represented by a first, self-decodable redundancy version and a first rate matching pattern selected from a set of at least two self-decodable rate matching patterns determined by a redundancy version parameter; receive a confirmation of incorrect receipt from the receiver; retransmit the information a first time in a second data packet upon receipt of the confirmation using a second redundancy version, and thereby select the redundancy version in dependence on a coding rate, select a self-decodable redundancy version if the coding rate is lower than a predefined upper coding rate, and select a further rate matching pattern using the redundancy version parameter, which is different from the rate matching pattern used in the first data packet; and retransmit the information a second time in a third data packet upon receipt of a further confirmation of incorrect receipt, and thereby use a third redundancy version in dependence on a coding rate and select a self-decodable redundancy version if the coding rate is higher than the predefined upper coding rate. See, e.g., descriptions of HARQ in 3GPP TS 25.309, discussion of retransmission sequence and rate matching in 3GPP TS 25.212, and discussion of HARQ information signaling in 3GPP TS 25.321.

57. Additionally, Defendants ZTE, AT&T, and T-Mobile are liable for indirect infringement of the '786 patent because they induce and/or contribute to the direct infringement of the patent by their customers and other end users.

58. Each Defendant is a 3rd Generation Partnership Project ("3GPP") member organization, or is affiliated with a 3GPP member organization. 3GPP solicits identification of standard essential patents. Defendants have had actual notice of the '786 patent at least by way of disclosure to 3GPP via the European Telecommunications Standards Institute ("ETSI," an organizational member of 3GPP). Defendants AT&T and T-Mobile have also had actual notice of the '786 patent by way of its assertion against them in Case No. 6:14-cv-759 (E.D. Tex.). In addition, on information and belief, ZTE monitors other litigation involving CCE, and therefore was also on actual notice of the '786 patent by way of the '786 patent's assertion in Case No. 6:14-cv-759 (E.D. Tex.). Finally, Defendants also have knowledge of the '786 patent based on filing and service of this Complaint.

59. Despite having knowledge of the '786 patent, Defendants named in this Count have specifically intended and continue to specifically intend for persons who acquire and use such devices, including their customers, to use such devices in a manner that infringes the '786 patent, including at least claims 1-5, 8, and 12. This is evident when Defendants encourage and instruct customers and other end users in the use and operation of the '786 ZTE Devices.

60. In particular, despite having knowledge of the '786 patent, Defendants have provided, and continue to provide, instructional materials, such as user guides, owner manuals, and similar online resources (available via http://www.zteusa.com/support_page/, for instance) that specifically teach and encourage customers and other end users to use the '786 ZTE Devices

in an infringing manner. By providing such instructions, Defendants ZTE, AT&T, and T-Mobile know (and have known) that their actions have, and continue to, actively induce infringement.

61. Additionally, Defendants named in this Count know, and have known, that the '786 ZTE Devices include proprietary hardware components and software instructions that work in concert to perform specific, intended functions. Such specific, intended functions, carried out by these hardware and software combinations, are a material part of the inventions of the '786 patent and are not staple articles of commerce suitable for substantial non-infringing use.

62. Specifically, each of the '786 ZTE Devices contains at least a baseband processor and associated transceiver which contain functionality that, as claimed in claims 1-5, 8, and 12-13, is specifically programmed and/or configured to initially transmit information content in a first data packet, wherein the information is represented by a first, self-decodable redundancy version and a first rate matching pattern selected from a set of at least two self-decodable rate matching patterns determined by a redundancy version parameter; receive a confirmation of incorrect receipt from the receiver; retransmit the information a first time in a second data packet upon receipt of the confirmation using a second redundancy version, and thereby select the redundancy version in dependence on a coding rate, select a self-decodable redundancy version if the coding rate is lower than a predefined upper coding rate, and select a further rate matching pattern using the redundancy version parameter, which is different from the rate matching pattern used in the first data packet; and retransmit the information a second time in a third data packet upon receipt of a further confirmation of incorrect receipt, and thereby use a third redundancy version in dependence on a coding rate and select a self-decodable redundancy version if the coding rate is higher than the predefined upper coding rate. Defendants ZTE, AT&T, and T-Mobile are, thus, liable for contributory infringement.

63. ZTE and AT&T test, make, use, offer for sale, sell, and/or import the '786 AT&T Mobile Devices and '786 Cricket Mobile Devices described in this Count, pursuant to one or more contractual agreements between them relating to, at least, the distribution and sale of such devices. Accordingly, ZTE and AT&T are jointly, severally, or alternatively liable for infringements described in this Count.

64. ZTE and T-Mobile test, make, use, offer for sale, sell and/or import the '786 T-Mobile Mobile Devices described in this Count, pursuant to one or more contractual agreements between them relating to, at least, the distribution and sale of such devices. Accordingly, ZTE and T-Mobile are jointly, severally, or alternatively liable for infringements described in this Count.

65. CCE has been damaged as a result of Defendants' infringing conduct described in this Count. Defendants ZTE, AT&T, and T-Mobile are, thus, liable to CCE in an amount that adequately compensates it for their infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

JOINDER OF PARTIES

66. CCE incorporates paragraphs 1 through 65 herein by reference.

67. On information and belief, AT&T, Verizon, Sprint, and T-Mobile have each purchased or otherwise acquired from ZTE certain mobile devices for sale, resale, and/or distribution to their customers (and other end users) that are the subject of Counts I through III (or some subset thereof). Thus, for these Counts, the right to relief against AT&T, Verizon, Sprint, and/or T-Mobile is asserted jointly and severally with ZTE.

68. The alleged infringements set forth in Counts I through III arise out of the same transaction, occurrence, or series of transactions or occurrences, relating to the testing, making, using, offering for sale, selling, and/or importing of accused ZTE mobile devices.

69. Questions of fact common to all Defendants will arise in this action including, for example, infringement by, or through use of, the accused ZTE mobile devices.

70. Thus, joinder of ZTE, AT&T, Verizon, Sprint, and T-Mobile is proper in this litigation pursuant to 35 U.S.C. § 299(a).

WILLFULNESS

71. Despite having knowledge of asserted patents, and knowledge that they are directly and/or indirectly infringing claims of asserted patents, Defendants have nevertheless continued their infringing conduct in an egregious manner. This includes, but is not limited to, Defendants' collective willful blindness, including their refusal to investigate whether the accused products infringe asserted claims of, at least, the '872, '770, and '786 patents. For at least these reasons, Defendants' infringing activities detailed above have been, and continue to be, willful, wanton and deliberate in disregard of CCE's rights, justifying enhanced damages under 35 U.S.C. § 284.

JURY DEMAND

CCE hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

PRAYER FOR RELIEF

CCE requests that the Court find in its favor and against Defendants, and that the Court grant CCE the following relief:

- a. Judgment that one or more claims of the '872, '770, and '786 patents have been infringed, either literally and/or under the doctrine of equivalents, by one or more Defendants and/or by others whose infringements have been induced by one or more Defendants and/or by others to whose infringements one or more Defendants contributed;
- b. Judgment that Defendants account for and pay to CCE all damages to, and costs incurred by, CCE because of Defendants' infringing activities and other conduct complained of herein;
- c. Judgment that Defendants account for and pay to CCE a reasonable, ongoing, post-judgment royalty because of Defendants' infringing activities and other conduct complained of herein;
- d. That Defendants' infringements relative to one or more of the '872, '770, and '786 patents be found willful from the time that Defendants became aware of the infringing nature of their products, and that the Court award treble damages for the period of such willful infringement pursuant to 35 U.S.C. § 284;
- e. That CCE be granted pre-judgment and post-judgment interest on the damages caused by Defendants' infringing activities and other conduct complained of herein; and
- f. That CCE be granted such other and further relief as the Court may deem just and proper under the circumstances.

Dated: October 12, 2017

Respectfully submitted,

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